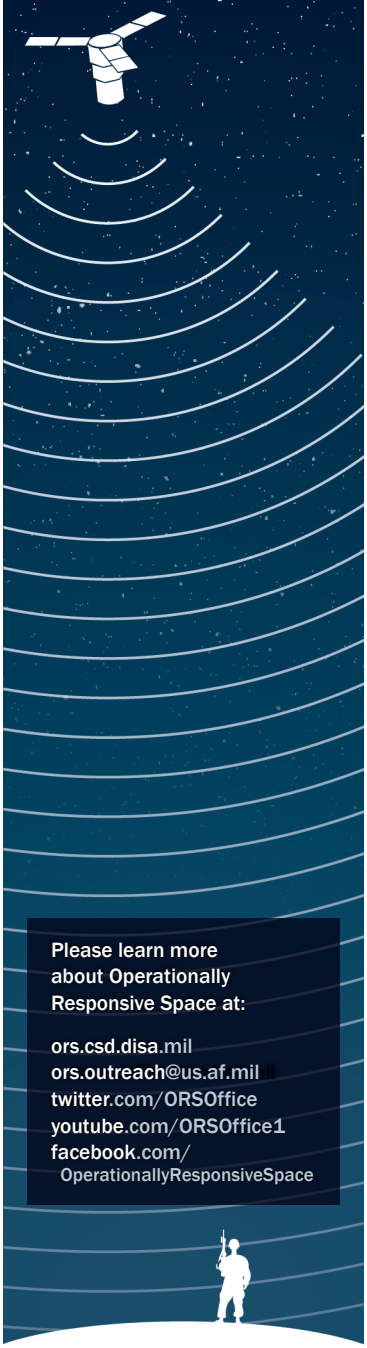
OPERATIONALLY RESPONSIVE SPACE

ORS

Operationally Responsive Space–4

"Super Strypi – Responsive Small Launch"



Mission Description

The ORS Office, in partnership with Sandia National Laboratories, the University of Hawaii, the Pacific Missile Range Facility and the Aerojet Rocketdyne Corporation, is developing a low cost, small launch system known as Super Strypi. The goal is to deliver payloads in the range of 300kg to Low Earth Orbit (LEO). This effort includes the development of three new solid rocket motors and installation of a new rail launcher at PMRF. The Super Strypi launch system is designed to reduce cost using established sounding rocket technologies, methods and practices to include using spin stabilization throughout the flight, low parts count, and a new rail launcher. The University of Hawaii's HiakaSat will fly as the primary payload on the Integrated Payload Stack with an additional 12 CubeSats flying as secondary payloads.

Super Strypi Launch System Objectives

Develop responsive, low cost launch system

- 300kg/475km/45 degree inclination
- $15M in production ($12M desired)

Exploit 21st century range

- Reduced infrastructure, Autonomous Flight Safety System (AFSS), GPS metric tracking, space-based TM relay, automated flight planning

Commercial launch service

Mission Goals

Demonstrate the Super Strypi launch capability

Establish baseline performance of the Super Strypi launch vehicle

Demonstrate flight performance of three new solid rocket motors

Develop and install the rail launcher at PMRF

Deliver HiakaSat to orbit

Utilize excess lift capacity for CubeSats and ORS test objectives

Please learn more about Operationally Responsive Space at:

ors.csd.disa.mil
ors.outreach@us.af.mil
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Partners:

Sandia National Laboratories

Hawaii Space Flight Laboratory (HSFL)

Pacific Missile Range Facility (PMRF)

Aerojet-Rocketdyne Corporation

Major Milestones:

LEO-1 static fire: 30 Sep 2013

LEO-7 static fire: 14 Aug 2012

Critical Design Review: 15 Sep 2012

Rail launcher manufacturing complete: 22 Oct 2013

Launch Date: Fall 2014

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